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A FOLLOW-UP STUDY OF THE EFFECTS OF AURAL-ORAL FRENCH INSTRUCTION IN THE ELEMENTARY SCHOOL ON PUPILS' ACHIEVEMENT IN A SECONDARY SCHOOL PROGRAMME.

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THE EFFECT OF AUDIOLINGUAL FRENCH INSTRUCTION IN THE ELEMENTARY SCHOOL ON THE PUPIL'S ACHIEVEMENT IN A SECONDARY SCHOOL LANGUAGE PROGRAM, AS SHOWN BY THIS FOLLOW-UP STUDY, IS DEPENDENT UPON PROGRAM ARTICULATION THROUGHOUT THE GRADES AND COORDINATION BETWEEN TESTING AND THE LEARNING SITUATION. THE PROCEDURE FOR THE STUDY INVOLVED 354 GRADE 9 PUPILS IN FIVE SECONDARY SCHOOLS IN WHICH BOTH THE EXPERIMENTAL GROUP (AUDIOLINGUAL FRENCH INSTRUCTIONAL EXPERIENCE IN PUBLIC SCHOOL) AND THE CONTROL GROUP (NO PREVIOUS EXPERIENCE) WERE CLOSELY MATCHED WITH RESPECT TO SEX, AGE, LEVEL OF INTELLIGENCE, GENERAL ACHIEVEMENT, AND SOCIO-ECONOMIC RATING. OTHER DETERMINING FACTORS IN THE STUDY WERE THAT THREE OF THE SCHOOLS HAD NO LANGUAGE LABORATORY, ONE SCHOOL GROUPED PUPILS ACCORDING TO EARLIER LANGUAGE TRAINING, AND THE OTHERS GROUPED PUPILS BY CHOICE OF COURSE. SPECIFIC RESULTS SHOW THAT THE LANGUAGE LABORATORY, OR PREVIOUS AUDIOLINGUAL INSTRUCTION, IS OF SOME BENEFIT ON THE BASIS OF LATER ORAL PROFICIENCY TESTING, BUT OF NO USE AND PERHAPS EVEN DETRIMENTAL TO THE DEVELOPMENT OF RESPONSES TO THE FORMAL, STRUCTURAL PATTERNS OF THE NEW LANGUAGE. THE INCONSISTENCY BETWEEN PROGRAM OBJECTIVES AND THE CRITERIA OF TESTING MUST BE CORRECTED TO ACHIEVE MAXIMUM USE OF THE LANGUAGE LABORATORY AND FLES PROGRAMS. CHARTS ON TEST RESULTS AND A SUMMARY BREAKDOWN ARE INCLUDED. (SS)

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THE BOARD OF EDUCATION FOR THE CITY OF TORONTO

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A FOLLOW-UP STUDY OF THE EFFECTS OF AURAL-ORAL FRENCH INSTRUCTION IN THE ELEMENTARY SCHOOL ON PUPILS' ACHIEVEMENT IN A SECONDARY SCHOOL PROGRAMME

A. BACKGROUND OF THE STUDY

A proposition advanced that earlier learning of a second language will increase a child's proficiency in the Secondary School has so far not been demonstrated conclusively. Carroll (1960) summarized two available studies (Price, 1956; Justman and Nass, 1956) which both show that students who had taken French in the Elementary School showed a slight superiority in high school French as measured by criteria commensurate with Secondary School aims. Dryer (1955) reported that some students received significant advantages from an early introduction to aural-oral French (Grade 5 level) and participated in an advanced course for apt students in the high school programme.

In the period from February 1960 to June 1961, a programme of aural-oral French instruction was introduced into the Grade 7 and Grade 8 curricula of nine schools in Toronto. One hundred and two pupils in three classrooms received French instruction through the series of films "French Through Television" produced by Language Research Incorporated, Harvard University. One hundred and five pupils in three classrooms received French instruction through teaching under the supervision of the Consultant in French for the Public Schools.

B. PURPOSE OF THE STUDY

The present study was a follow-up of the students into the Secondary Schools to evaluate the effects of the preliminary French instruction. The major objective in following up the students was to attempt to define the influence of aural-oral instruction in the Elementary School on the pupils' achievement in the Secondary School second-language programme. The second objective was to examine various conditions obtaining in the Secondary School Grade 9 programme which were influencing pupils' learning of French.

Thus, a study of effects of language laboratories on achievement was introduced into the follow-up study. It was felt that the language laboratory would offer novel involvement for students who had had previous introduction to second-language learning. The language laboratory was introduced into two of the five Secondary Schools in which the present study was conducted and its facilities were used both with students who had had previous French instruction and those who had not. As special provision was made for some of the students who had been taught French in Elementary School, a comparison was also made between those grouped in a special form and those grouped by their choice of course and option rather than by their earlier experiences in French.

C. METHOD

1. Procedure

The study was carried out during a nine month period from September 1961 to May 1962. It concerned 354 Grade 9 pupils in five Secondary Schools. Of the 354 pupils, 177 had received instruction in French in Public School. The remaining 177 pupils had received no instruction in French prior to Grade 9. For the purposes of this study, the 5 schools are designated as Schools A,B,C,D, and E. Of the 5 schools, Schools A,B and C had no language laboratory and Schools D and E had a language laboratory. In School A, pupils were grouped into a special form (AE) as a result of their earlier experiencesin the Public School. In Schools B,C,D, and E, pupils were grouped by their choice of course and option rather than by their earlier experiences in French.

To test the hypothesis that students with prior aural-oral instruction will achieve better in the Secondary School language programme, students were matched with respect to intelligence and achievement rating with students who had not received aural-oral instruction. For the purpose of this study, those students with experience in aural-oral French instruction are referred to as the Experimental group and their within-school matched pairs as the Control group.

Within each of the 5 schools participating in this study, Experimental and Control students were matched as closely as possible with respect to sex, age, level of intelligence, general achievement and socio-economic rating (as indicated on the Ontario School Record Cards). In

addition, Laboratory and Non-laboratory students were matched between schools with respect to intelligence, achievement and relation to the experimental condition (Public School experience). A similar matching was performed between students in school A who had previous French experience (AE) and students in school B with previous experience (BE). The composition of these matched pairs with respect to intelligence and achievement matching, is indicated in Tables 1, 2 and 3.

TABLE 1
WITHIN-SCHOOL MATCHING
COMPARISON OF MEANS OF I.Q. AND ACHIEVEMENT

School	N	I.Q.[1]		Achievement[2]	
		Experimental	Control	Experimental	Control
Non-Laboratory					
A	72	2.0	1.9	2	2
B	27	1.9	1.8	2	2
C	25	1.9	2.1	2	2
Laboratory					
D	26	2.0	2.2	2	2
E	27	2.4	2.4	3	3
Total	177	2.0	2.1	2.2	2.2

1 Measured on basis of I.Q. ratings on OSR cards converted to ordinal number ratings.
2 Measured on basis of achievement ratings on OSR cards converted to ordinal number ratings.

TABLE 2
INTER-SCHOOL MATCHING
COMPARISON OF MEANS OF I.Q. AND ACHIEVEMENT

Condition	N	I.Q.[1]		Achievement[2]	
		Laboratory	Non-laboratory	Laboratory	Non-laboratory
E	26	2.2	2.0	2.6	2.3
C	26	2.4	2.2	2.4	2.4
Total	52	2.3	2.1	2.5	2.4

1 Measured on basis of I.Q. ratings on OSR cards converted to ordinal number ratings.
2 Measured on basis of achievement ratings on OSR cards converted to ordinal number ratings.

TABLE 3
INTER-SCHOOL MATCHING FOR SPECIAL GROUPING
COMPARISON OF MEANS ON I.Q. AND ACHIEVEMENT

Condition (Non-laboratory Experimental)	N	I.Q.[1]	Achievement[2]
Special Grouping (EE)	13	1.9	2.1
General Grouping (EE)	13	2.1	2.3

1 Measured on basis of I.Q. ratings on OSR cards converted to ordinal number ratings.
2 Measured on basis of achievement ratings on OSR cards converted to ordinal number ratings.

2. Tests and Measures

Comparisons were made of French performance on the following bases:

(a) French Oral Proficiency Test. This test was administered at the end of the second term to all pupils. This oral pictorial test was administered in three structural parts. Part I required identification of objects by naming them, a three point scale denoting the correctness of the response. It endeavoured to measure the ability of the child to respond at the representational level of language learning. Part II required identification of qualifiers and operators, location of objects in space and time, and again, correct identification was measured by a three point scale. It was an attempt to measure the ability of the child to express action and qualification, and to locate objects in time and space. Part III involved testing of the student's awareness of the formal, structural patterns of the language and his use of the correct forms: in this section the student was tested in response to correct conjugal form of irregular verbs, in response to tense, and in response to the correct use of possessive pronouns and correct use of the partitive article. (Again, measurement was on a three point scale). Part III thus attempted to measure the extent to which the child was in fact aware of, and using properly, the formal patterns of the new language which differentiate it structurally and syntactically from his first language. In Part III, a measurement was also made of the

student's proficiency in pronunciation, on a three point scale. Measurement of pronunciation will be referred to as Part IV of the test. Part IV indicated the degree to which the child has accustomed himself to the new phonemic patterns which differentiate the second language from his mother tongue.

(b) Term Examinations. A statistical comparison was made of the three end-of-term written examinations.

(c) Error Analysis. To determine the functional effect of the experimental conditions, final examination papers were collected from each of the five schools and used as the basis for an analysis of the kinds of errors being made by the students in the different groups.

Since no standardized test was given to all students writing the third term paper, parity between the criteria used in the various schools has to be assumed. The types of errors made by the students will be analyzed under the following headings:

(i) Vocabulary

Three categories of errors were apparent to the investigators with respect to the symbolic content of the language being learned. All three were errors in vocabulary. The first of these, referred to for the purposes of this study as V.1, represents faulty learning of code vocabulary with reference to English equivalents. The second kind of vocabulary error tested is intrinsically different from the learning of code vocabulary. V.2 represents the faulty learning of idiomatic

vocabulary. Idiom vocabulary differs from code vocabulary in that an idiomatic statement is meaningful in terms of itself and not in terms of its English equivalent. In fact, it is very often difficult to literally translate an idiomatic statement into one's mother tongue without losing the meaning content in the process. In terms of learning, the third category of vocabulary error is so closely ralated to the first, they can only be mechanically separated. V.3 represents the faulty learning of gender. Since there is no parallel for this in the learning of the English language, it is useful to test it separately.

(ii) Analytical Concepts

With respect to learning the symbolic form of the new language, three general clusters of structural or formal errors were considered; the first cluster represents grammatical errors, the second, syntactical errors and the third, graphic-phonemic errors.

Of the grammatical errors, four categories were tested. The first of these is failure to make a qualifier or representative pronoun agree in number and gender with the noun it modifies or replaces. This is an error of correspondence or relation and will be known for the purposes of this study as G.1. G.2 indicates incorrect use of the partitive article, and G.3 failure to use the correct prepositional form. G.4 indicates failure to express the operator correctly with reference to the proper person and conjugal form. (In most cases, this involved the testing of irregular verbs) The

kinds of errors of this kind relate specifically to the grammar content of the Grade 9 programme and on all papers these specific grammatical forms have been tested explicitly.

The second broad category of formal errors is those errors of improper syntax. (Sy)

The third classification represents graphic-phonemic errors. The structural errors described so far reflect the ability of the student to respond to the correct relation, form and order of words in a sentence in a meaningful context. The graphic-phonemic errors represent failure to respond to the graphic equivalents of spoken sound elements in a meaningful context. Three kinds of errors are tested here. Sp represents spelling errors, St represents errors of elision and Phon. represents errors of phonetic transcription. With respect to the latter, it is questionable how accurately a written examination is as a measure of a student's phonemic differentiation.

(iii) General Comprehension

Two broad general categories reflected the students' general comprehension of the language. V.4 represents total lack of comprehension of the question asked and the appropriate answer. V.5 represents errors of partial or ambiguous comprehension.

D. RESULTS

1. French Oral Proficiency Test

(a) Experimental vs. Control

Using 71 pairs of students, matched within each of the 5 schools, a t test was performed, comparing the mean scores of the Experimental and Control groups with respect to their achievement on the French Oral Proficiency Test. The results are recorded in Table 4.

TABLE 4
FRENCH ORAL PROFICIENCY TEST
EXPERIMENTAL VS. CONTROL (WITHIN-SCHOOL MATCHING)

School	N	Mean		t
		E	C	
A	13	53.77	49.00	1.52
B	22	59.95	56.54	1.56
C	8	55.50	50.75	2.14 *
D	15	59.40	54.47	2.19 *
E	13	57.38	54.46	.67
Total	71	57.73	54.82	1.80

* Significant at the .05 level

Comparisons made school by school indicated a significant difference (.05 level) in favour of the Experimental group for only schools C and D. In schools A, B, and E, the differences, while in the same direction, were not statistically significant. The mean scores, for all the schools combined were not significantly different.

t tests, performed on the differences in achievement between the Experimental and Control groups on each part of the French Oral Proficiency Test, indicate that, although the mean was higher for the Experimental group in each case, the differences were not statistically significant.

TABLE 5
FRENCH ORAL PROFICIENCY TEST
EXPERIMENTAL VS. CONTROL (WITHIN-SCHOOL MATCHING, N = 71)

FOPT Marks Compared	Means		t
	E	C	
Part I	16.32	15.39	1.85
Part II	19.65	18.35	1.79
Part III	10.35	9.80	1.09
Part IV	11.27	10.99	.57
Total	57.73	54.82	1.80

(b) Laboratory vs. Non-laboratory

A comparison was made between students with and without language laboratory experience on different parts of the French Oral Proficiency Test, using fifty-two pairs of subjects, matched between schools for Public School experience and with respect to intelligence and achievement. Table 6 reports the results of t tests.

TABLE 6
FRENCH ORAL PROFICIENCY TEST
LABORATORY VS. NON-LABORATORY (INTER-SCHOOL MATCHING, N = 52)

FOPT Marks Compared	Mean		t
	L	NL	
Part I	17.35	14.83	3.96 **
Part II	18.75	18.81	- .06
Part III	9.06	10.85	-3.19 **
Part IV	11.15	10.96	.33
Total	56.31	55.44	1.37

** Significant at the .01 level

There was no significant difference in total score, though there were differences in some of the parts. Students with laboratory experience responded better to a test of object naming than their pairs who had had no such experience, whereas, their partners with no laboratory experience were better achievers in the section of the test concerned with assessing the student's ability to respond to the formal patterns of the new language.

(c) Special vs. General

Experimental students in School A were grouped together in one French class (AE). In order to compare their achievement on the French Oral Proficiency Test with students who had also experienced aural-oral instruction in Public School but who were not so grouped (BE), 13 Experimental students in School A were matched for intelligence and achievement with 13 Experimental students from School B, non-laboratory schools. Table 7 summarizes these results.

TABLE 7
FRENCH ORAL PROFICIENCY TEST:
SPECIAL GROUP (AE) VS. GENERAL GROUP (BE) - BOTH NON-LABORATORY (N = 13)

FOPT Marks Compared	Mean		t
	AE	BE	
Part I	14.54	16.77	-1.76
Part II	19.15	18.69	.25
Part III	9.15	11.15	-1.49
Part IV	10.77	10.77	.00
Total	53.62	57.38	1.03

There was no significant difference between the performance of the students in School A who were grouped according to previous instruction and those in School B who were grouped according to choice of option in Secondary School.

.2. Term Tests

(a) Experimental vs. Control

Using 162 pairs of students (matched within each school with respect to intelligence and achievement), t tests were performed comparing the achievement of the Experimental and Control groups on each of the three term tests administered by their teachers. (Table 8)

TABLE 8
TERM MARKS
EXPERIMENTAL VS. CONTROL (WITHIN-SCHOOL MATCHING, N = 162)

Marks Compared	Mean		t
	E	C	
1st Term	67.53	66.01	.94
2nd Term	64.60	64.53	.04
3rd Term	64.67	64.04	.34
Difference Between 1st and 2nd Term	2.93	1.49	1.53

There was no significant difference between the performance of students who had received aural-oral instruction in French previously and students of equivalent intelligence and achievement who had not been exposed to French instruction. A t test was also performed on the mean differences in performance of the Experimental and Control group between first and second term tests. The aural-oral French programme apparently had no effect in helping the students exposed to it to maintain or raise their achievement as measured by the criteria of the Secondary School language programme.

(b) Laboratory vs. Non-laboratory

Using the inter-school matching of 52 pairs of students from the laboratory group and the non-laboratory group, t tests were performed comparing the mean achievement of these students in the first, second and third terms and also with respect to the difference between first and second term (Table 9).

TABLE 9
TERM MARKS
LABORATORY VS. NON-LABORATORY (INTER-SCHOOL MATCHING, N = 52)

Marks Compared	Mean		t
	L	NL	
1st Term	53.62	73.06	6.67 ***
2nd Term	55.46	67.65	4.47 ***
3rd Term	47.94	63.34	4.44 ***
Difference Between 1st and 2nd Term	1.87	- 5.40	4.20 ***

*** Significant at the .001 level

The group of students without laboratory experience achieved better in every term than their matched pairs who had been given laboratory experience. How do the means of the laboratory and non-laboratory groups change in the interim between terms? t tests (Table 9) indicate a significant difference in the change. Of the 52 pairs of students compared, those exposed to a laboratory situation gained approximately 1.87 percent between first and second term, whereas those not exposed to a laboratory situation lost approximately 5.40 percent between first and second term. There is only one chance in a thousand that such a difference between groups could occur purely by chance. As these students were matched with respect to intelligence and achievement, and since there is no significant interaction between the two sets of variables, we may conclude that the language laboratory has been significantly effective in the gain made by these students between the first and second term.

It was impossible to measure gain or loss between laboratory and non-laboratory groups from the second to the third term, due to the removal of many of the better students from each group by recommendation. For these students there is no third term mark. Where third term marks were required for these students for comparison, an average was taken of the particular recommended student's first and second term marks. Such an average cannot be used in order to ascertain differences in marks between second and third term.

(c) Summary of (a) and (b)

An analysis of variance on the two variables (Table 10) has the advantage of testing for significant interaction between them.

TABLE 10
ANALYSES OF VARIANCE: EXPERIMENTAL VS. CONTROL AND LABORATORY VS. NON-LABORATORY, ON THE ORAL PROFICIENCY TEST AND EACH OF THE 3 TERM TESTS

Source of Variation	FOPT				1st Term				2nd Term				3rd Term			
	Sum of Squares	d.f.	Mean Square	F	Sum of Squares	d.f.	Mean Square	F	Sum of Squares	d.f.	Mean Square	F	Sum of Squares	d.f.	Mean Square	F
Lab. vs. Non-lab.	19.48	1	19.48	.16	9,827.08	1	9,827.08	28.45**	3,864.96	1	3,864.96	8.82**	5,583.12	1	5,583.12	12.96**
Exper. vs. Control.	106.01	1	106.01	.85	43.16	1	43.16	.12	172.65	1	172.65	.39	361.89	1	361.89	.84
Interaction	118.47	1	118.47	.95	269.17	1	269.17	.78	116.35	1	116.35	.27	58.49	1	58.49	.14
Within Groups	12,455.42	100	124.55		34,545.81	100	345.46		43,799.69	100	438.00		43,077.85	100	430.78	
Total	12,699.38	103			44,685.22	103			47,953.65	103			49,08[illegible].35	103		

** Significant at .01 level

Means for the Above Comparisons (N = 26 for each cell)

	FOPT		1st Term		2nd Term		3rd Term	
	E	C	E	C	E	C	E	C
Laboratory	58.38	54.23	54.58	52.65	55.23	55.69	53.35	55.58
Non-lab.	55.38	55.50	70.81	75.31	65.31	70.00	66.50	71.73

Would, for example, exposure to language laboratories have a different effect for those who received oral instruction in Public School as opposed to those who had not? An interaction of variables could produce a distorted effect in comparing the means of Experimental and Control group and the Laboratory and Non-laboratory groups. Table 10 indicates no interaction and we can assume no distortion of effect.

Table 10 indicates, as did Table 9, that the achievement of those students exposed to the Public School programme and the achievement of those who have not is similar. To repeat, the aural-oral training programme was not effective in making students better able to achieve higher scores, measured by criteria commensurate with the Secondary School language programme. Also the significant difference of achievement in favour of the group of students who were not exposed to a laboratory situation, is indicated.

(d) Special vs. General

With reference to the special grouping in School A, comparisons were made between the special group in School A (AE) and the regular group in School B (BE) with respect to performance on each term examination. Table 11 indicates no significant difference between these two groups with respect to the three term tests.

TABLE 11
TERM MARKS
SPECIAL GROUP (AE) VS. GENERAL GROUP (BE), BOTH NON-LABORATORY
(N = 13)

Marks Compared	Mean		t
	E	C	
FOPT	53.62	57.38	1.03
1st Term	69.46	73.15	.93
2nd Term	70.23	67.15	.54
3rd Term	70.69	67.31	.61

3. June Recommendations

Table 12 indicates the results of a comparison of the numbers of students recommended at the end of the third term in each of the Experimental and Control groups.

TABLE 12
NUMBER OF RECOMMENDATIONS

	Experimental	Control	Total
Students Recommended	71	68	139
Students Not Recommended	91	94	185
Total	162	162	324

Chi Square = .113

There was no significant difference between the number of students recommended in each group (chi square = .113). Likewise (Table 13) there was no significant difference between the number of students in the Laboratory group and in the Non-laboratory group who were recommended. (chi square = .269)

TABLE 13
NUMBER OF RECOMMENDATIONS
LABORATORY VS. NON-LABORATORY

	Experimental	Control	Total
Students Recommended	9	12	21
Students Not Recommended	43	40	83
Total	52	52	104

Chi Square = .269

However, it must be noted in connection with both of those analyses (Tables 12, 13) that each school used different standards for recommendation.

4. Findings of Error Analysis

Using the classifications that have been described, the number of errors was tabulated. The mean incidence of these errors, by group, is recorded in Table 14, and significant differences, found by t test and analysis of variance are discussed below.

TABLE 14
MEAN INCIDENCE OF EACH ERROR TYPE
LABORATORY, NON-LABORATORY, EXPERIMENTAL AND CONTROL GROUPS
ON THE 3rd TERM EXAMINATION

Error Types		Laboratory Group	Non-laboratory Group
V.1	Experimental Group	18.50	8.57
	Control Group	18.36	10.72
V.2	Experimental Group	6.82	9.02
	Control Group	4.89	6.39
V.3	Experimental Group	1.54	1.31
	Control Group	2.00	1.44
G.1	Experimental Group	8.50	4.86
	Control Group	8.11	5.61
G.2	Experimental Group	3.91	1.90
	Control Group	3.82	3.89
G.3	Experimental Group	1.45	.86
	Control Group	.73	1.39
G.4	Experimental Group	9.09	8.35
	Control Group	7.64	9.28
SY	Experimental Group	.50	1.47
	Control Group	.32	.56
SP	Experimental Group	4.82	5.14
	Control Group	3.57	6.22
ST	Experimental Group	2.00	1.29
	Control Group	1.86	1.33
PHON	Experimental Group	2.09	1.81
	Control Group	2.18	2.40
V.4	Experimental Group	9.86	3.29
	Control Group	11.04	4.44
V.5	Experimental Group	.73	.59
	Control Group	.54	1.00
Number in each Cell (Except Phon.)			
	Experimental Group	22	51
	Control Group	28	18
Number in each Cell (Phon. only)			
	Experimental Group	22	37
	Control Group	28	5

(a) Vocabulary

V.1 - Code Vocabulary. No difference was discovered between Experimental and Control groups, with or without laboratory experience. Students with laboratory experience, both Experimental and Control, made significantly more errors of this kind than students without laboratory experience.

V.2 - Idiomatic Vocabulary. Students with previous experience in aural-oral French instruction, both with and without laboratory, made significantly more errors of this kind than those who had no such experience. Students with laboratory experience, both Experimental and Control groups, made significantly fewer errors of this kind than students without laboratory experience. The fewest errors of idiom were made by students with laboratory experience and without Public School experience.

V.3 - Errors of Gender. No significant differences in achievement existed between Experimental and Control groups, and between Laboratory and Non-laboratory groups of students.

(b) Analytical Concepts

G.1 - Errors of Correspondence and Relation. Students with laboratory experience, both Experimental and Control groups, made significantly more errors of this kind than students without laboratory experience. Previous aural-oral instruction in French had no significant effect on the number of errors of this kind made by students, whether or not they had participated in a laboratory programme.

G.2 - Structural Errors of Partitive Article. Only those students with previous oral instruction and no laboratory experience made significantly fewer errors of this type than the other treatments.

G.3 - Prepositional Errors. No significant differences in achievement were discovered between Experimental and Control groups, and between Laboratory and Non-laboratory groups of students. However, the Laboratory group with Public School experience made significantly more errors than the Non-laboratory group with no Public School experience. Also the Laboratory group with no preliminary experience made significantly fewer errors than the Non-laboratory group with previous experience. Thus laboratory experience facilitated learning for the Control group but was detrimental to the Experimental group.

G.4 - Errors in the Correct Conjugal Form of the Verb; Sy - Errors of Syntax; Sp - Errors of Spelling; St - Errors of Elision; Phon - Errors of Phonetic Transcription. Analyses of these error types reveals no significant differences between groups.

C. General Comprehension

V.4 - Errors of General Comprehension. Students with previous experience in aural-oral French instruction, both those with laboratory experience and those without it, were significantly higher achievers in this respect than those who were not exposed to the Public School programme. On the other hand, students without laboratory experience, both Experimental and Control, achieved significantly more in this respect than did students with laboratory experience.

V.5 - Errors of Partial or Ambiguous Comprehension. There were no significant differences in achievement between Experimental and Control groups, or between Laboratory and Non-laboratory groups of students.

E. SUMMARY OF RESULTS

The following table shows a breakdown in summary form of the results of comparison with respect to each of the special conditions.

TABLE 15
EXPERIMENTAL VS. CONTROL, LABORATORY VS. NON-LABORATORY, SPECIAL GROUPING VS. GENERAL GROUPING

Tests	1st Comparison		2nd Comparison		3rd Comparison	
	Exptl.	Cont.	Lab.	Non-lab.	AE	BE
French Oral Proficiency Test						
Total	N.S.		N.S.		N.S.	
Part I	N.S.		+	-	N.S.	
Part II	N.S.		N.S.		N.S.	
Part III	N.S.		-	+	N.S.	
Term Tests						
Term I	N.S.		-	+	N.S.	
Term II	N.S.		-	+	N.S.	
Term III	N.S.		-	+	N.S.	
Diff. I-II	N.S.		+	-	N.S.	
Errors - Third Term						
V.1 (Code Vocab.)	N.S.		-	+		
V.2 (Idiom Vocab.)	-	+	+	-		
V.3 (Gender)	N.S.		N.S.			
G.1 (Relational)[1]	N.S.		-	+		
G.2 (Partative)[1]	N.S.		N.S.			
G.3 (Preposition)[2]	N.S.		N.S.			
G.4 (Verb)	N.S.		N.S.			
Sy (Syntax)	N.S.		N.S.			
Sp (Spelling)	N.S.		N.S.			
St (Elision)	N.S.		N.S.			
Phon (Phonetics)	N.S.		N.S.			
V.4 (Comprehension)	+	-	-	+		
V.5 (Partial Comprehension)	N.S.		N.S.			

NOTE: Better performance is indicated by + when the difference is significant.

[1] Experimental Group without laboratory experience performed better than other group

[2] There was a significant interaction between the two variables so that the two best conditions were Experimental without Laboratory and Control with Laboratory.

F. DISCUSSION OF RESULTS

On the basis of an oral proficiency test, the oral instruction programme in French in Public School was of some benefit to those who received it. In addition, the laboratory was effective in achieving better performance in object-naming. On the other hand, neither laboratory training nor previous experience in aural-oral instruction in French was of any use, at least at this stage of the French programme in developing responses to the formal, structural patterns of the new language. In fact, evidence suggests that laboratory training may be detrimental to the acquiring of these skills, if the analytical instruction programme is not consistently aligned with the student's development of aural-oral skills in the language.

Measured on the basis of consistent achievement within the framework of the normal Grade 9 programme, specifically with three written term tests, it was found that aural-oral instruction in French was of no advantage to students who had it. It is important to remember that the objectives of an aural-oral instruction programme are dissimilar to the objectives of an analytical instruction programme, and that the criteria of testing achievement vary with the dissimilarity of the objectives. These differences are of special importance when we consider the comparison between students who had no laboratory experience to those who had it. Those without laboratory experience consistently achieved higher scores than those who were given experience in the laboratory. On the basis of the oral proficiency test, laboratory experience appeared to be a hindrance to the learning of the formal structure of the language. Since term tests in Grade 9 are based largely on reading and writing proficiency in French with emphasis on grammatical analysis, it would be expected that diminished achievement would show on the term tests as well.

Possibly the system of responses established prior to formal language instruction came into conflict with the new system of responses the learner was asked to develop, and this may have produced an attempt to transfer unsuccessfully the old responses to the new learning situation. Over a period of time, negative transfer coupled with reinforced lack of achievement, will automatically reduce the achievement and lower the motivation of a student.

It is worth noting, however, that the laboratory seems to have been effective in motivating students to learn. Even though results clearly indicated that students without laboratory experience achieved better on term tests than those with laboratory experience, group standards in the Laboratory group did not decrease during the course of the year. Whereas those students who were not exposed to the language laboratory lost, on the average, 5.40 percent between Christmas and Easter, those students with laboratory experience, in fact, gained on the average, 1.87 percent. It must be remember, however, that these were teacher-prepared examinations, separately set in each school.

With respect to the error study, it is apparent that the area in which most striking patterns occur is in the difference between code vocabulary learning and idiom vocabulary learning. In the learning of code vocabulary, those students with laboratory experience made more errors than those students without it. In the learning of idiom vocabulary, those students with laboratory experience made fewer errors than those students without it. This is an important finding, if we keep in mind that the analytical comprehension of and familiarity with a language code is essentially different from learning to speak, think and feel in a new language. Since these are essentially different functions,

they require different modes of instruction and different criteria of achievement measurement.

In addition, with respect to the learning of idiom vocabulary, it was found that students with no public school experience made fewer errors of this kind than students who had had previous instruction in French. Thus the optimum learning of written idiom vocabulary was accomplished by students with language laboratory experience and without aural-oral French instruction in the elementary school.

It appears that neither laboratory nor aural-oral French instruction alone make it easier for students to respond well to the learning of grammatical forms in a new language.

With respect to the general comprehension of the questions asked and answers expected, those students with previous aural-oral French experience achieved better than those without it, whereas those without laboratory experience achieved better than those who were exposed to a laboratory. It may very well be that the language laboratory has introduced an element of confusion into the secondary school language programme, by being inconsistent with the operation of that programme.

G. IMPLICATIONS

If we are going to teach language skills in the schools, it is imperative that we specify the objectives of the programme we institute. A number of false objectives may make a serious language programme inadequate.

> One of these arises when we assume that the number of words known in the vocabulary of a new language is in itself an indication of familiarity with the language. Another arises from the conception of structure learning as linear. Neat separation of forms and logical progression from one to another bear little resemblance to the experience of the speaker of a new language. A third type of false objective is a high score on a standardized test, where the motivation of the student is on earning a high score and not on performance of the skill learned. A fourth false objective is translation. There is a place in the scheme of things for translation as a legitimate objective, but that place is not in the early levels of language learning. Translation is at once too difficult a task and too damaging to the learner to be a part of his activities until he has reached a high level of achievement in the second language. Nothing will short-circuit the language learning process more quickly and turn a coordinated system into a compound system more effectively than premature attempts at matching one language with another. (Brooks, 1960)

One of the biggest problems faced by all large-scale investigations of second language has been the inadequacy of previously devised tests for measurement of achievement in aural-oral comprehension. While tests in aural comprehension and discrimination in language usage have been in use since the war, it has been difficult to devise objective measuring techniques for oral competency where administration and scoring create problems. If we are going to introduce children to a second language using the aural-oral method, then our tests must be devised to measure achievement and improvement

in aural-oral skills, and if we are going to expose a student to a laboratory self-pacing aural situation, we must ask him to respond in terms of the new skills he is learning.

Another, the problem of articulation of the second language programme has become acute wherever the pattern of language teaching has changed. The kinds of activities and skills which are emphasized at different age levels are not comparable in terms of achievement, and certainly cannot be tested adequately with the few testing instruments available. If the elementary grades devote themselves primarily to listening and speaking, the intermediate grades introduce reading and writing, the junior high school stresses analytical skills, then the senior high school student should be able to use his second language in many areas of the school curriculum. (Harris, 1960)

An experimental programme in oral instruction in Brighton public school in Rochester, N.Y., introduced in 1949 at the Grade 5 level, is worth mentioning in terms of its objectives, its results, and the methods used in teaching and testing (Dryer, 1955). The following results are recorded: Students who had experienced four years of aural-oral French before coming into Grade 9 understood oral French more easily than students who were beginning with the Grade 9 programme. The former were quicker to infer meanings of new words heard orally. They expressed themselves orally in French with greater ease. They were able to use new words and grammatical construction orally more quickly. They accepted French explanations of new materials as a matter of course. They asked questions about difficult points in French and expected an answer in French. They were adept at asking their question within the limits of their vocabulary and then easily repeated

and learned a few new words if it made their questions more intelligible. Amongst the new-comers to French, however, there was a wall of resistance to the exclusive use of French. At the end of one year, the students with elementary-school experience in French had slightly better grades than the new-comers, on the same written test. In addition, oral examinations were given throughout the course of the year at least twice a month, both of the quiz and dialogue type, orienting the student consistently in the direction of oral achievement. Motivation was maintained partly by giving a double mark on the report card (public school), one for written work and one for oral. It was felt that this would not only focus the child's attention on his oral progress, but also force the teacher to reach a periodic conclusion about each student's oral work. At the end of the first year in high school, aptitude for learning a second language was considered, and those students who could benefit from an advanced programme were put into a special class, thus giving students with natural abilities an opportunity worth working for. (Dryer, 1955)

The results of the Rochester experience relatively coincide with the results of our study, taking into consideration difference in length of aural-oral programme, with respect to oral proficiency but not with respect to general (analytical) achievement. It might be noted that whereas, in Rochester, reading and writing introduced at the Grade 7 level are continued through Grade 12 (high school graduation), aural-oral learning remains a major aim. Perhaps this is some indication of the kind of programme which might be employed here.

We may have to think of introducing our aural-oral programme at a much earlier stage in the public school programme. In recent years,

as part of the renewed interest in teaching language, some studies have been conducted to assess the best age at which the student should be introduced to language learning. Dr. Wilder Penfield (1953), in his consideration of the neurophysiological mechanisms of speech, has contributed the major evidence. His neurological studies suggest that the muscular and neural plasticity of the small child makes him capable of infinite phonetic potentialities, such that he should be introduced to a second language between the ages of 4 and 10. Dr. Leonor Larew (1961) measured articulation in children between age 7 and 11 and found that the 7 year olds were the highest achievers, achievement decreasing with age. Dunkel and Pillet (1956, 1957, 1958) in their carefully evaluated three-year study at the University of Chicago found that the third and fourth grades are better than later levels; they did not introduce French before the third grade. Kirch, (1956) at the University of Delaware, in a less extensive programme found that the place to begin is the first grade. "Opinions and findings thus clearly indicate that there are physiological as well as practical reasons for introducing languages at the earliest possible point in the curriculum." (Larew, 1961)

Students could then be trained to listen to and speak the language before being asked to gain an analytical comprehension of it. Within two or three years, some students would be in a position to use French as a new learning medium, and it could be used as a language of instruction for other subjects on the curriculum (in subject areas where instruction is simple and basic). After the student had achieved this kind of proficiency in the new language, it would be time enough to introduce him to grammar composition and a study of

French literature. The kind of analysis that is today continued at the university level could be introduced at the beginning of high school for at least those students who show sufficient aptitude, at the same level of sophistication as the English programme in high school.

Introduction of a serious skill-based approach to second language learning, however, requires the development of a systematic programme for French teaching, consistent with the needs and abilities of the student at each level of his training, coordinated from the beginning through high school graduation, and consistent with the scientifically developed principles of language learning. Serious consideration will have to be given to the development of techniques which will increase the student's motivation and sense of achievement. This will, of course, involve articulation of the Public School and Secondary School programme, so that the latter reinforces what the public school has taught.

H. CONCLUSION

The results of the study indicate that language learning is not a simple process, that in fact it has many phases, the learning of which must be ordered systematically, for each of which teaching and testing procedures must be devised and used discriminantly, and all of which must be used eventually with proper relation to one another. More than anything else, the study underlines the necessity of considering the many aspects of language instruction separately and of assessing the effects of various procedures with a more fine-grained analysis than has been attempted up until the present time. The pitfalls of using an overall or average measure in assessing achievement are apparent from this study. The study, for example, indicates that while laboratory instruction is useful in the learning of idiom (written test) and for proficiency in object-naming (oral test), it gives us no idea of the real usefulness of the language laboratory, objectively measured, in an aural-oral programme in either a Public school or a Secondary School setting. Part of the reason for this is the fact that we did not introduce the laboratory into this setting to test it <u>per se</u> but rather as a novelty situation with reference to the other experimental condition. The other part is the fact that a rigorous re-assessment of the objectives of our second language programme remains to be done. The more adequately we are able to specify what those objectives are, the better will we be able to design the necessary instructional programmes to meet them.

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